

Organic news

Summer Edition 2011



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Big Day Out at Tilpa

The "Making More from Sheep" Lamb Production Day was recently held at Justin and Julie McClure's property "Kallara Station".

The concept for the field day arose from discussions during a teleconference meeting of the members of the Wilcannia Bestprac Group, and was organised by NSW DPI in conjunction with Justin and Julie. The day proved to be a huge success with close to 100 people attending, some

travelling from as far afield as Broken Hill, Hungerford, Port Augusta, Dubbo and Ivanhoe.

Kallara Station is an 110,000 hectare certified organic farm located on the Darling River near Tilpa in far western NSW. The farm produces organic lamb, beef and goat meat. With the benefit of the recent Darling River flooding they have been able to undertake an extensive cropping program. Approximately 405 ha of organic milling oats (cv. Mitika) was grown with exceptional yields of 3.46 tonnes/ha being recorded. The oats are sold to Uncle Toby's with processing undertaken by Blue Lake Milling. The McClure's also grew 160 ha of organic canola which is being processed into oil at Cootamundra for export into European markets. In addition, an estimated 4000 large round and square bales of hay, cut from native summer floodplain grasses and medics, have been produced.

The field day showcased practical demonstrations of the infrastructure used on "Kallara" to improve livestock management, reduce labour input and costs and assist with meeting processor specifications. This included demonstrations of the Prattley 5 way-auto-drafter housed in a covered working area and the remote water management system that is used to monitor the water supply points on the property. Sheep fat scoring was demonstrated and producers had an opportunity to practice the technique. Static displays were also provided by staff from Western CMA, NSW DPI, Landmark Russell Cobar, Elanco and Durapoly.

Producers attending the day heard a range of presentations that looked directly at opportunities and management options for lamb production in the western division. Presentations included an overview of organic lamb production on Kallara by Justin McClure. Justin spoke about selecting rams with high weaning weight ASBV's (Australian progeny Sheep Breeding Values) to ensure quick growing lambs. He mentioned that some of the



Above: The crowd at the Lamb Production Workshop held in the woolshed on "Kallara" at Tilpa. Photo: Chrissie Ashby

native pasture hay recently baled on the property will be used to finish lambs for the organic markets, in particular, for a lucrative contract with T & R Pastoral for the U.S. export market using Kallara's USDA organic certification. Maintaining supply of lambs for such contracts may require more western lamb producers to consider USDA organic certification. The importance of fencing on the property for multi-species, eg Dorpers, goats and cattle was also outlined by Justin.

NSW DPI Livestock Officer, Geoff Duddy, outlined that all sheep enterprises are going well at the moment, with similar gross margins for prime lamb enterprises through to a merino wool-based operations. Believing that the sheep meat market would remain strong for several years Geoff suggested that western lamb producers should concentrate on producing as many lambs as possible in the short term as flock rebuilding gains momentum. Given that feed quality and availability may be limiting in most years within the pastoral zone he urged those present to calculate their individual costs of production and consider selling their lambs as stores or re-stockers if unable to produce a finished product.

Geoff's presentation was complemented by a report from organic lamb buyer Paul Leonard, representing the meat processing company T & R Pastoral. T & R intend to initially purchase and process up to 60,000 organic lambs per year (1200-1500 lambs per week) for supply into the U.S. premium meat market. Paul anticipated that this number would rise once the supply of organic lamb increases.

Two presentations by Trudie Atkinson Livestock Officer, NSW DPI, and organic lamb producer Garry Hannigan from the local property "Churinga" focussed on sheep reproduction.

Trudie spoke about managing reproduction in pastoral flocks including highlighting opportunities for producers to improve the reproductive performance of their flocks. Trudie encouraged producers to understand their flock's performance in terms of fertility, fecundity and lamb survival rather than just lamb marking percentage, saying that pregnancy scanning and 'wet and drying' were useful tools for achieving this. Trudie stressed the importance of giving ewes sufficient opportunity to

regain condition (to fat score three) after rearing a lamb before the next joining. Improving ewes' fat score from 2 to 3 at joining will generally result in 12 extra lambs being conceived per 100 ewes joined (depending on flock responsiveness).

Preparing rams for joining is important as well, particularly their health and condition in the two months preceding joining. Soundness checks should be done on the 4 T's - teeth, toes, tossle and testicles. To increase lamb survival and production, it was suggested management should focus on meeting ewe nutrition requirements and fat score targets during late pregnancy and lactation. Trudie gave examples of how plans to meet ewe requirements could vary depending on seasonal conditions and how knowing the ewes' pregnancy status and fat score can provide options. The importance of incorporating good grazing management and opportunities for improvements via within-flock selection were also discussed.

Local landholder Garry Hannigan and his wife Tracy run 5000 dorper damara Wiltshire cross ewes on a 48,600 ha certified organic property, located 130 km east of Broken Hill. Garry spoke about his long term goal to lift his average lambing percentage from 160% to 200% as 10% of his ewes were already having twins every six months.

The final speakers for the day, Ben Allen from NSW DPI in Broken Hill and landholder Ben Mannix from "Gumbooka" at Bourke, spoke about the looming wild dog problem in western NSW and the importance of taking the current dog issue in the western division seriously. Landholders were urged to attend the current round of wild dog control workshops. Attendees were also asked to highlight areas on a map where dogs had been seen or shot in the last 12 months and many were surprised to learn just how widespread the problem had become in the western division.

Article by Sally Ware, NSW DPI, Hay and Trudie Atkinson, NSW DPI, Trangie.

For further information contact Trudie Atkinson, NSW DPI, Trangie. Email: trudie.atkinson@industry.nsw.gov.au

Rodale Institute - 30 year trial results, Organic vs Conventional

A 30 year comparison of organic and conventional agricultural systems in the US has come up with some interesting results.

After 30 years, the Rodale Institute says its organic yields match conventional yields, and outperform conventional in drought years.

Its organic systems have built rather than depleted soil organic matter, used 45% less energy, produced 40% less greenhouse gases, and were more profitable.

Rodale started the trial in 1981 to study what happens during the transition from chemical to organic agriculture. In the first three years yields declined, but then matched the conventional system.

The trial comprised three farming systems: manure-based organic, legume-based organic and a conventional system using synthetic fertiliser.

In 2008 each system was divided in two to compare traditional tillage with no-till practices. The organic systems use Rodale's no-till roller crimper, and the conventional system uses herbicide applications and no-till specific equipment.

The organic systems include up to seven crop rotations in eight years, compared with two conventional crops in two years.

The organic systems improved soil carbon levels, particularly in the manure system, and had 15-20% more water moving through the soil, resulting in reduced runoff and more groundwater recharge.

Organic corn yields were 31% higher in drought years, outperforming genetically engineered drought-tolerant varieties which increased 6.7-13.3% over conventional non-drought varieties.

Organic corn and soybean crops tolerated higher levels of weed competition while producing equivalent yields to their conventional counterparts.

Overall, Rodale found that the organic systems were nearly three times more profitable than the conventional systems, and economically competitive even without a price premium. Their most profitable grain crop was organically grown wheat, and the least profitable was conventional corn.

On the energy side, diesel fuel was the biggest input into the organic systems, while nitrogen fertiliser was the biggest input into the conventional systems.

The biggest greenhouse gas emissions were direct inputs from fuel use and seeds for the organic systems, and fertiliser production and fuel use for the conventional system.

You can find out more about the trial at <http://www.rodaleinstitute.org/fst30years>.

Source: Article in *AgToday* November, 2011, written by Rebecca Lines-Kelly, NSW DPI, Wollongbar. Email: rebecca.lines-kelly@industry.nsw.gov.au



Above: View of the farming systems trial at Rodale Institute. Source: <http://www.rodaleinstitute.org/files/FSTbookletFINAL.pdf>

Native critters and plants plus for farms

A new study is exploring the complex relationship between the natural environment, primary industries and the native animals and plants which make farms and forests their homes, in an attempt to boost biodiversity across western NSW.

Researchers from the Trangie Agricultural Research Centre have developed a model to better explain the relationships between plants, animals, birds, bats, reptiles, frogs and insects with land use in low rainfall areas.

NSW Department of Primary Industries research scientist, Cathy Waters, said the model was built using existing research results from NSW DPI, Forests NSW and Office of Environment and Heritage studies.

"We are looking at a range of agricultural activities - grazing management, cropping activities, retention of remnant native vegetation - to identify how on-farm management can benefit biodiversity," Dr Waters said.

"In the past, agriculture has been seen as a cause of biodiversity loss, we are now investigating how our production systems can encourage biodiversity to benefit both the environment and production."

Agricultural production depends on biodiversity to underpin long-term landscape viability and important ecosystem processes which are needed to maintain a healthy environment.



Above: Nest boxes on farms can provide habitat for native animals. This sugar glider has made his home in a box installed by NSW DPI staff in a tree on a Central West property. Photo: Brian Lukins, NSW DPI.

Dr Waters said that in identifying agricultural management practices which maintain or improve biodiversity, farmers could reduce the rate of species loss and also maintain or increase primary production.

“We know that eucalypt plantations established for forestry purposes have the capacity to provide food and shelter for birds and animals,” she said.

“Enhancing remnant vegetation to improve its composition with shrubs and trees will provide an understorey habitat for insects – the presence of those insects may also have beneficial effects for crops and pastures.

“Native vegetation, trees, shrubs and grasses, can have positive effects on hydrological functions on the farm - controlling run-off, reducing erosion and managing dryland salinity.”

Researchers aim to give farmers, land managers and Catchment Management Authorities solid information they can use to assess existing operations and explore alternative options.

Dr Waters said critical components of the model will be tested in future farm case studies to identify any information gaps.

Source: NSW DPI News release by Bernadette York, NSW DPI, Orange.

For more information contact Dr. Cathy Waters, NSW DPI, Trangie. Email: cathy.waters@industry.nsw.gov.au

Editor's note: Future editions of Organic News will provide updates on the project's progress.

News, publications, commentaries & events

News & commentaries

NSW DPI's Bathurst organic vineyard update

This season will see the first official crop for the NSW DPI's organic vineyard located at Bathurst Primary Industries Centre.

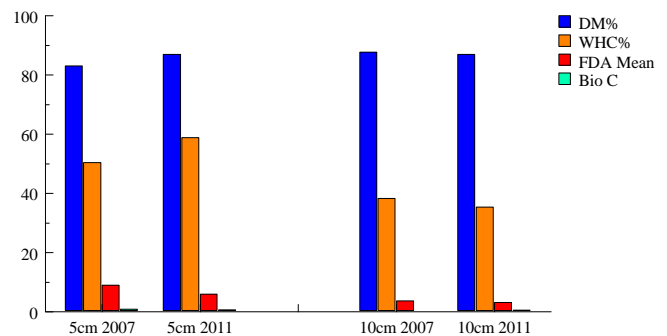
Given the past two wet springs, disease management has provided its challenges. In 2010-2011 potassium bicarbonate (2 applications) was used to control powdery mildew and copper (3 applications) to control downy mildew.

This season the program has been stepped up to protect the berries. Five sulphur sprays and four copper have been used against vine mite, downy and powdery mildew.

2011 has also seen a thinning program in the more developed vines that will produce the first crop this year.

Soil tests have been repeated in the vineyard, however the results (see graph below) have been disappointing. There has been no improvement in soil biology health. Soil microbial activity, water holding capacity and microbial biomass carbon are generally lower than results from 2007. It does give an indication that this area requires new soil management strategies.

Block A



The next steps for the organic vineyard at Bathurst include:

- Harvest first crop
- Improve soil health
- Improve 'organic' disease management practices
- Work with industry to make best use of this resource.

For further information contact: Anne Mooney, Extension Horticulturist, NSW DPI, Orange. anne.mooney@industry.nsw.gov.au

IBISWorld identifies the Key Success Factors for the organic industry

Market researchers and analysts, IBISWorld, identifies Key Success Factors for a business. The most important for the organic industry were identified as:

Having a good technical knowledge of organic farming systems

An organic farmer must be knowledgeable in organic farming principles and systems to successfully produce organic products.

Access to organic inputs

Operators need access to organic inputs to produce food organically. Livestock producers, in particular, need to be able to access organic grain sources.

Consistent supply to the market

Organic producers need to deliver a consistent supply to market to ensure downstream demand. Organic producers can aid consistency through being part of a producer marketing cooperative.

Accreditation from a certifying organic organisation

Producers need to be certified organic to legally sell their products as 'organic' in domestic and international markets.

(Editors note: A producer does not have to be certified to sell organic produce in the domestic market. However there are severe penalties for misrepresenting non-organic products as organic. In NSW, the Food Authority, jointly with fair trading agencies, makes sure no one misleads consumers about the food they buy. Harsh penalties exist under the Food Act 2003 and the Food Authority can prosecute businesses that fail to comply with the law. Certification is the most reliable way to ensure the integrity of the organic product in the marketplace. See:

http://www.foodauthority.nsw.gov.au/_Documents/industry_pdf/organic_foods.pdf)

Production of value added organic produce

Organic products must meet other consumer demands, such as taste, product freshness, packaging and convenience (e.g. washed produce).

Appropriate physical growing conditions

Regional weather conditions have an important influence on production levels and quality.

Source: IBISWorld Pty Ltd. IBISWorld Industry Report X0013. Organic Farming in Australia, March 2011. Website: <http://www.ibisworld.com.au/>

Chilean needle grass project has success

A project to eradicate isolated infestations of Chilean needle grass (*Nassella neesiana*) from four properties in the Angledale area has been very successful due to good and continuing spring rain.

The aim of the project is to prevent the germination of seed from the Chilean needle grass by smothering it with alternative plants - which are non-invasive - such as oats, rye grass and clover. This strategy has been successful on the four properties that have been targeted because of the weed's density in that location. Bega Valley Shire Council's vegetation officer Jamie Dixon-Keay said this project has been running for a number of years and this is the best spring growth of competitive pastures the area has seen. The project, which is funded jointly by council and Southern Rivers Catchment Management Authority, aims to eradicate all known infestations of Chilean needle grass before it spreads onto other properties and becomes a costly problem for those affected landholders.

Chilean needle grass is an invasive tussocky grass which looks a little like native spear grass. It is related to serrated tussock, has little feed value and can out-compete preferred pasture and native species. The grass has sharp pointed seeds which can penetrate animals' skin and eyes, causing painful damage.

Source: The Weed's News Digest. November, 26 - December 1, 2012.

http://invasivespecies.org.au/traction?type=digest_html&proj=WeedsNews&sdate=20111126&edate=20111201

War on rust: Bid to save Australia's eucalypts

Australian scientists have declared open war on a fungal disease that is rapidly infecting the nation's iconic myrtaceous trees and shrubs.

Eucalyptus or myrtle rust is caused by the fungus *Puccinia psidii* and appears to have originated from South America. The disease is a recent invader of the Australian continent with potential to cause havoc in native forests and woodlands, and among industries that depend on native trees and shrubs.

The disease was first detected on the central coast of New South Wales in April 2010. By December it had spread to Queensland, and now spans a 2000 km corridor along the east coast of Australia. In December last year the Myrtle Rust National Management Group agreed it was no longer technically feasible to eradicate it.

A team of researchers in the Cooperative Research Centre for National Plant Biosecurity (CRCNPB) is currently working overtime to understand the disease, how it spreads and which species are most at risk of attack - as a basis for developing a national strategy for managing it.

Mike Ashton, Director of Biosecurity Queensland's Myrtle Rust Program, which is leading the CRCNPB's myrtle rust project, says myrtle rust has the potential to affect many plant species that are integral to Australia's fragile ecosystems - like eucalypts and *Melaleuca*.



Above: Australian scientists have declared open war on a fungal disease known as eucalyptus or myrtle rust (*Puccinia psidii*) that is rapidly infecting the nation's iconic myrtaceous trees and shrubs. Source: CRC Plant Biosecurity

So far more than 100 species in the Myrtaceae family have been found to be susceptible to the disease," Mr Ashton says.

Industries already impacted by myrtle rust, or likely to be, include the nursery and garden, forestry, bee, zoo, native fruit, cut flower and plant oil industries.

"Myrtle rust infects young leaves and stems on susceptible plants, and may infect floral buds and fruit. The disease kills off new shoots, stems and young leaves leading to defoliation, poor growth rates, reduced flower and seed production and ruining the appearance of native trees.

"By affecting native trees, it could also harm native animals, birds and insects that depend upon them.

"A major concern is the regeneration and even survival of particular species of native Myrtaceae.

"The main focus of the CRCNBP research is to gather information on which plants are susceptible to the fungus, its natural range in Australia, and the behaviour of the disease in the Australian environment so we can better predict what the likely impacts will be," he says.

Source: Extract from 'Get Farming Australia' article 29/11/11. Website:

http://www.getfarming.com.au/pages/farming/article_s_view.php?fld=540072011129171623&cld=7&nIS_Tld=s20321

More information: Cooperative Research Centre for National Plant Biosecurity website:

<http://www.crcplantbiosecurity.com.au/>

NSW DPI website:

<http://www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust>

Refundable tax offset for new conservation tillage farming equipment

The Federal government's Carbon Farming Futures program is providing refundable tax offsets to assist farmers to purchase conservation tillage equipment.

The refundable tax offset for new conservation tillage equipment will provide funding of up to \$44 million to encourage primary producers to adopt conservation tillage practices.

Primary producers will be able to claim a 15 per cent refundable tax offset for new eligible conservation equipment installed and ready for use between 1 July 2012 and 30 June 2015. Eligible conservation tillage equipment includes:

- tine machines fitted with minimum tillage points (for example, narrow, knife or inverted 'T' points) to achieve minimum soil disturbance and less than full cut-out
- disc openers (single, double, or triple arrangements)
- disc/tine and disc/blade hybrid machines.

More information on the refundable tax offset for new conservation tillage equipment will be available soon on the Clean Energy Future website:

<http://www.cleanenergyfuture.gov.au/>



BFA School Gardens Program funding 2012

In May 2010, the Biological Farmers of Australia (BFA)

launched the Organic School Gardens Program - a free education program available to all Australian primary schools and anyone with an interest in organic gardening.

Funding is now open for Leader Schools and Starter Schools for 2012. Selected Leader Schools receive a minimum of \$1000 retail value of gardening goods such as organic fertilisers, worms, seed, weed mats etc. from supporting businesses!

The Starter Schools Program has been developed to support schools that may require assistance to establish their school gardens and are at the beginning of their Organic School Gardens Program journey.

The closing date for applications for Leader Schools and Starter Schools is December 31st 2011.

For more information see the BFA website:

<http://www.organicsschools.com.au/>

Publications

New organic factsheet

A new NSW DPI factsheet has been published for organic farmers. The publication, "Blackberry control on organic farms" provides organic growers with a number of non-chemical options to control blackberry.

Organic farmers, like other farmers, are required by law (the *Noxious Weeds Act 1993*) to manage the growth of blackberry in a manner that reduces its numbers, spread and incidence and which continuously inhibits its reproduction.

The factsheet describes an integrated approach utilising a range of management options as the most effective means of achieving blackberry control. If chemical application is required advice is provided on minimising the impacts on an enterprises' organic certification.

The factsheet can be viewed at:

<http://www.dpi.nsw.gov.au/agriculture/farm/organic/blackberry-control>

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